

Appl. No. 09/505,830
Amdt. dated March 11, 2004
Reply to Office action of December 31, 2003

Amendments to the Claims:

Claims 1-5 (canceled)

1 Claims 6 (currently amended): An apparatus for providing a
2 crypto key and an associated checkword of said crypto key to an
3 encryption device for a telemeter system of a missile, said
4 apparatus comprising:

5 a key loader having said crypto key and said associated
6 checkword stored therein;

7 a microcontroller connected to said key loader to
8 receive said crypto key and said associated checkword
9 from said key loader, said microcontroller sending a
10 first variable request signal to said key loader to
11 effect a transfer of said crypto key and said
12 associated checkword from said key loader to said
13 microcontroller for storage within said
14 microcontroller;

15 said microcontroller including an internal EEPROM for
16 storing said crypto key and said associated checkword
17 and a copy of said crypto key and said associated
18 checkword;

19 said microcontroller being connected to said encryption
20 device, said microcontroller sending a sense in signal

Appl. No. 09/505,830
Amdt. dated March 11, 2004
Reply to Office action of December 31, 2003

21 to said encryption device to initiate a load of said
22 crypto key and said associated checkword into said
23 encryption device;

24 said microcontroller receiving from said encryption
25 device a second variable request signal, said
26 microcontroller, responsive to said second variable
27 request, loading said crypto key and said associated
28 checkword into said encryption device; and
29 said microcontroller being connected to a transmitter
30 for the telemeter system of said missile, said
31 microcontroller providing a transmitter disable signal
32 to said transmitter to disable said transmitter when
33 said crypto key and said associated checkword are
34 loaded into said encryption device preventing said
35 crypto key and said associated checkword from being
36 transmitted by said transmitter; and
37 said microcontroller containing a computer software program
38 for controlling, handling and interpreting said
39 transfer of said crypto key and said associated
40 checkword from said key loader to said microcontroller
41 for storage within the internal EEPROM of said
42 microcontroller, said computer software program

Appl. No. 09/505,830
Am dt. dated March 11, 2004
Reply to Office action of December 31, 2003

43 controlling, handling and interpreting the storing of
44 said crypto key and said associated checkword and said
45 copy of said crypto key and said associated checkword
46 within the internal EEPROM of said microcontroller,
47 said computer software program controlling, handling
48 and interpreting the loading of said crypto key and
49 said associated checkword into said encryption device
50 from the internal EEPROM of said encryption device, and
51 said computer software program controlling, handling
52 and interpreting a disabling of said transmitter when
53 said crypto key and said associated checkword are
54 loaded into said encryption device and an enabling of
55 said transmitter after a successful load of said crypto
56 key and said associated checkword into said encryption
57 device.

1 Claim 7 (original). The apparatus of claim 6 wherein said
2 microcontroller comprises an 8-bit Microcontroller.

Claim 8 (canceled)

1 Claim 9 (original): The apparatus of claim 6 further comprising a

Appl. No. 09/505,830
Amdt. dated March 11, 2004
Reply to Office action of December 31, 2003

2 light emitting diode connected to said microcontroller, said
3 light emitting diode displaying a status for a load of said
4 crypto key and said associated checkword into said encryption
5 device.

Claim 10 (canceled)

1 Claim 11 (currently amended): The apparatus of claim 10 further
2 comprising a light emitting diode connected to said
3 microcontroller, said light emitting diode displaying a status
4 for an erase of said crypto key and said associated checkword and
5 the copy of said crypto key and the associated checkword from the
6 internal EEPROM of said microcontroller.

12 (canceled)

1 13 (currently amended). An apparatus for providing a crypto
2 key and an associated checkword of said crypto key to an
3 encryption device for a telemeter system of a missile, said
4 apparatus comprising:
5 a key loader having said crypto key and said associated
6 checkword stored therein;

Appl. No. 09/505,830
Amdt. dated March 11, 2004
Reply to Office action of December 31, 2003

7 an 8-bit microcontroller connected to said key loader to
8 receive said crypto key and said associated checkword
9 from said key loader, said 8-bit microcontroller
10 sending a first variable request signal to said key
11 loader to effect a transfer of said crypto key and said
12 associated checkword from said key loader to said 8-bit
13 microcontroller for storage within said 8-bit
14 microcontroller;
15 said 8-bit microcontroller including an internal EEPROM for
16 storing said crypto key and said associated checkword
17 and a copy of said crypto key and said associated
18 checkword;
19 said 8-bit microcontroller being connected to said
20 encryption device, said 8-bit microcontroller sending a
21 sense in signal to said encryption device to initiate a
22 load of said crypto key and said associated checkword
23 into said encryption device;
24 said 8-bit microcontroller receiving from said encryption
25 device a second variable request signal, said 8-bit
26 microcontroller, responsive to said second variable
27 request, loading said crypto key and said associated
28 checkword into said encryption device;

Appl. No. 09/505,830
Amdt. dated March 11, 2004
Reply to Office action of December 31, 2003

29 said 8-bit microcontroller being connected to a transmitter
30 for the telemeter system of said missile, said 8-bit
31 microcontroller providing a transmitter disable signal
32 to said transmitter to disable said transmitter when
33 said crypto key and said associated checkword are
34 loaded into said encryption device preventing said
35 crypto key and said associated checkword from being
36 transmitted by said transmitter;

37 a first light emitting diode connected to said
38 8-bit microcontroller, said first light emitting diode
39 displaying a status for a load of said crypto key and
40 said associated checkword into said encryption device;
41 said 8-bit microcontroller being connected to a missile
42 interface within said missile to receive a launch
43 signal from said missile interface upon a launch of
44 said missile, said 8-bit microcontroller, responsive to
45 said launch signal, erasing said crypto key and said
46 associated checkword and the copy of said crypto key
47 and said associated checkword from the internal EEPROM
48 of said 8-bit microcontroller;

49 a second light emitting diode connected to said
50 8-bit microcontroller, said second light emitting diode

Appl. No. 09/505,830
Amdt. dated March 11, 2004
Reply to Office action of December 31, 2003

51 displaying a status for an erase of said crypto key and
52 said associated checkword from said 8-bit
53 microcontroller; and
54 said 8-bit microcontroller containing a computer software
55 program for controlling, handling and interpreting said
56 transfer of said crypto key and said associated
57 checkword from said key loader to said 8-bit
58 microcontroller for storage within the internal EEPROM
59 of said 8-bit microcontroller, said computer software
60 program controlling, handling and interpreting the
61 storing of said crypto key and said associated
62 checkword and said copy of said crypto key and said
63 associated checkword within the internal EEPROM of said
64 8-bit microcontroller, said computer software program
65 controlling, handling and interpreting the loading of
66 said crypto key and said associated checkword into said
67 encryption device from the internal EEPROM of said
68 encryption device, said computer software program
69 controlling, handling and interpreting a disabling of
70 said transmitter when said crypto key and said
71 associated checkword are loaded into said encryption
72 device and an enabling of said transmitter after a

Appl. No. 09/505,830
Amdt. dated March 11, 2004
Reply to Office action of December 31, 2003

73 successful load of said crypto key and said associated
74 checkword into said encryption device, and said
75 computer software program controlling, handling and
76 interpreting the erasing of said crypto key and said
77 associated checkword and the copy of said crypto key
78 and the associated checkword from the internal EEPROM
79 of said 8-bit microcontroller.

14-15 (canceled)

1 16 (currently amended). The apparatus of claim 13 wherein
2 said 8-bit microcontroller is connected to a loader interface
3 within said missile to receive an erase signal from said loader
4 interface, said 8-bit microcontroller, responsive to said erase
5 signal, erasing said crypto key and said associated checkword and
6 the copy of said crypto key and the associated checkword from the
7 EEPROM of said 8-bit microcontroller.